Indian River Power LLC
P.O. Box 408
Millsboro, Delaware 19966

An NRG Energy Company

August 10, 2006

Ali Mirzakhalili
Air Quality Management Branch
Department of Natural Resources
and Environmental Control
156 South State Street
Dover, Delaware 19901

Dear Mr. Mirzakhalili,

The purpose of this letter is to provide to the Department of Natural Resources and Environmental Control ("DNREC" or "the Department") comments regarding the proposed Regulation 1146 which was issued to the Stakeholders Committee on July 3, 2006. Previously, DNREC provided a conceptual presentation of the regulation which included the foundation and justification of its permit design. Our comments address Regulation 1146 and the conceptual presentation. NRG has reviewed these documents and based on our analysis we believe modifications to the regulation would improve compliance and achieve the desired emissions reductions by 2012 as defined in the regulation.

Our comments focus on two primary concerns. First, the timelines associated with the 2009 interim requirements for SO2 and NOx and second, the final 2012 unit specific emissions limits for SO2 and NOx. The amount of time needed to design and build the control equipment required to achieve the 2009 levels at every unit makes it impossible to meet the 2009 timeline. The staggered emission levels referenced in the rule (interim/final) can only be achieved with different equipment which would result in multiple installations, one to achieve 2009 levels and separate installations to achieve 2012 levels. NRG proposes that, since only three facilities are affected by the rule, each develop a plant specific control implementation plan to achieve final emissions effectively and efficiently between 2009 and 2012. We respectfully request that DNREC consider this approach. In a good faith effort, NRG has attached a plan to implement controls for all three pollutants to achieve the final 2012 reductions (Attachment A). Please note that mercury controls (activated carbon injection) will be installed on all coal units prior to 2009.

NRG has given thought to alternatives to the 2012 unit specific emission levels of 0.125 and 0.26 lb/MMBtu for NOx and SO2, respectively that achieve the same level of control. NRG recommends that a facility lb/hr emission rate based on the proposed level applied to each unit, coupled with post control Title V unit specific emission rates in lb/MMBtu would achieve the same end. The maximum emission rate would be capped at the same level during high ozone periods and

the average could be achieved by over controlling the largest unit (Unit 4) with a wet scrubber and SCR.

We believe these changes are in alignment with other state's proposed programs, compliance would be achievable, and most important, these amendments will assure significant improvement to Delaware's air quality.

Attachment B contains more specific comments to the language in the proposed regulation. Attachment C is a comparison of state rule making initiatives within the region. .

At your convenience, we would like to meet with you to discuss these concerns and our recommendations to assure Regulation 1146 is achievable and beneficial for the state of Delaware. Please contact either Verne Shortell (609) 524-4983 or David Bacher on (302) 540-0327 to schedule a meeting and address any questions or comments regarding our recommendations.

Regards,

David Bacher
Regional Manager, Environmental Business
NRG Energy, Inc.

Verne Shortell
Executive Director, Environmental Business
NRG Energy, Inc.

Attachments:
A – Indian River Generating Station Proposed Emissions Reduction Schedule
B - Regulation 1146 Comments
C - Regional State Emission Reduction Initiatives

CC: J. Werner (DNREC)
G. Hopper (NRG)
M. Bramnick (NRG)

Attachment A

Indian River Generating Station Emission Reduction Schedule

Indian River Generating Station			
NOx- Low NOx Burners (LNB) with Selective non-Catalytic Reduction (SNCR) on Units 1,2&3, Selective Catalytic Reduction (SCR) on Unit 4 SO2- Trona/lime via Duct Injection (DI) on Units 1,2&3, wet scrubber on Unit 4			
Contam.	Item	Estimated Emission Rate (lb/MMBtu)	**Start Date***
NOx	Units 1-2 (ozone season)	0.36	**Ongoing**
NOx	Units 3-4 (ozone season)	0.3	**Ongoing**
SO2	Units 1-3	2.3	**Ongoing**
SO2	Units 4	1.02	**Ongoing**
NOx	Unit 2 LNB/SNCR	0.20	**5/1/2008**
NOx	Unit 3 LNB	0.18	**6/1/2008**
SO2	Unit 3 DI	0.50	**6/1/2008**
SO2	Unit 2 DI	0.50	**11/1/2008**
NOx	Unit 1 LNB/SNCR	0.20	**12/1/2008**
SO2	Unit 1 DI	0.50	**12/1/2008**
Phase I Multi Pollutant Rule effective			**1/1/2009**
NOx	Year-round SNCR Operation	0.20	**1/2/2009**
NOx	Unit 4 LNB Enhancement	0.20	**5/1/2009**
NOx	Unit 4 SCR	0.07	**6/1/2011**
SO2	Unit 4 wet scrubber	0.05	**6/1/2011**
Phase II Multi Pollutant Rule effective			**1/1/2012**

Activated carbon injection (ACI) followed by the existing precipitators will be installed to capture mercury before January 1, 2009.

Attachment B

State of Delaware Proposed Regulation 1146
Comments and Recommendations
NRG Energy, Inc.

Indian River Generating Station cannot comply with this draft regulation as written. Based on our analysis, the proposed 2009 Phase I interim timelines are not achievable and the 2012 Phase II unit specific limitations would require FGD and SCR on all units which is not feasible. Following are comments on the proposed rule and recommendations to amend the rule that will result in significant emission reductions throughout Delaware.

1. **2009 Interim Compliance**
   Concern: Indian River Generating Station can not comply with this regulation as proposed. Based on our analysis, the proposed 2009 Phase-I interim timelines for NOx and SO2 are not achievable.
   Justification: Compliance with the regulation as proposed is not possible because of interim timelines. Indian River will not run in known non-compliance and will be forced to shut down until controls can be installed.
   Recommendation: Amend the regulation to replace the interim compliance requirements with three facility specific reduction implementation plans between 2009 and 2012. This will allow the plants to effectively and efficiently meet the final objective which is long term emissions reductions by 2012.

2. **Compliance Timelines**
   Concern: The regulation allows only 2 years and 2 months from promulgation to compliance – January 1, 2009.
   Justification: To meet these limits, at least one unit (Unit 4) would require an advanced control device (such as FGD and SCR) to bring the facility average to within the proposed NOx and SO2 limits and Units 1-3 would install significant controls as well. If the regulation is promulgated in November 2006, sources would have only 26 months to comply. It is not possible to finance, design, permit, procure engineering/fabrication/constructors, install controls, and plan outage tie-ins on all four units within this timeframe. It is our understanding DNREC has assumed these timelines are feasible based on EPA's final report *"Engineering and Economic Factors Affecting the Installation of Control technologies For Multi Pollutant Strategies"* issued in October 2002. However, these timelines are "guidance" and represent individual projects; where all project activities are expedited and overlapping for either a single pollutant/multi unit or single unit/multi pollutant application. Further, EPA's guidance defines reasonable timelines of 40 to 42 months for multiple units and/or multiple installations and that additional time must be provided to schedule unit outages. NRG has worked with consultants on various technology options and the shortest feasible timeline for one major installation (FGD/SCR) on one unit would be 36 to 48 months from start to finish. The Keystone Generating Station in PA, in which NRG is a part owner, awarded a contract for the construction of 2 scrubbers in June 2006. They are scheduled to come on-line by the end of November 2009.

This installation is for 2 stand alone scrubbers for SO2, uncomplicated by multiple pollutant controls and multiple units and graced with a large piece of property with space to cleanly install the scrubber. Two years of engineering and planning went into this prior to the June award date. This plan could not be installed by a 2009 date if planning started in the fall of 2006. This is not comparable to a plant like Indian River which has four units addressing 3 pollutants and limited space. It is not realistic to believe these retrofit installations could be accomplished in only 26 months. The Keystone schedule will be submitted separately under company confidentiality requirements.
Recommendation: See item 1

3. **Planning and Cost**
   Concern 1: If compliance were possible (which it is not), NOx and SO2 control strategies would require maximum investment and redundant controls applied in 2009 and again in 2012.
   Justification: To meet the interim and final limits, NRG would have to apply all proposed controls by 2009 (LNB/OFA, SNCR, In-Duct Lime Injection, PRB, and ACI) and then replace them with FGD/SCR in 2012.
   Recommendation: See item 1.
   Concern 2: DNREC has based their justification that the cost of full compliance for all applicable sources would be $100 million to $175 million. As a result DNREC's assumed cost and impact to the end consumer of a 20% increase are significantly underestimated.
   Justification: NRG has worked with consultants and engineering firms to develop its control strategies. The cost for its proposed projects (NRG Powering Delaware) exceeds $330M to control the existing plant and do not achieve the unit by unit emission standards for SO2 and NOx.
   Recommendation: Revise cost estimates in DNREC documents.

4. **Level Playing Field**
   Concern: DNREC has expressed a desire to "level the playing field" by promulgating a rule that is equally stringent as rules in neighboring states and that provides regulatory certainty. NRG is in agreement with this objective. This regulation is more stringent than neighboring and regional state rules.
   Justification: The proposed rule is more stringent than CAIR or any other Mid Atlantic Region state rules (proposed or promulgated). Further, the proposed Indian River plan would be in compliance with NOx and SO2 rules in all other regional states including: Maryland, Pennsylvania, New Jersey, Virginia, New York, and West Virginia. The same Indian River plan cannot comply with Delaware's rule. Attachment C provides a summary of these regional state programs.
   Recommendation: Amend the regulation to be comparable to neighboring state initiatives by allowing limited intra and inter facility emissions averaging.

5. **Federal Rule Allowance Allocation**
   Concern: Proposed Regulation 1146 is silent on the allocation of pending NOx and Hg emissions allowances. It is assumed that NOx allowances will be allocated since Delaware has adopted CAIR.

Recommendation: It is assumed that NOx allowances will be allocated to the sources since Delaware has adopted CAIR. Delaware should also adopt the CAMR and maintain both the state program as well as CAMR. Within the rule, Delaware prohibits the use of CAMR Hg allowances for Delaware compliance with an exemption if applied controls can not meet the limitation. For example, if 85% reduction is achieved, allowance provisions should be made for the compliance gap.

6. **Monitoring and Reporting**
   Concern: Monitoring, record keeping, and reporting requirements are unreasonable and unclear. Further, full Part 75 QA/QC requirements are not practical for use as a compliance determination of emission rates or annual mass emissions.
   Justification: The regulation presents excessive monitoring, record keeping, and reporting in excess of current Title V requirements. This burden to the sources as well as to DNREC is unjustified as monitoring can be achieved more simply. In regard to monitoring, the "full application" of Part 75 QA/QC is not practical as a true compliance measure, specifically because of data substitution in the event of a failed monitor or error in data collection. As a result, a unit that is actually in compliance from an emissions perspective can be determined out of compliance by substituting high substitute data values as required.
   Recommendation: Sources should be given the option of stack testing or additional monitoring. Provisions should be made for data substitution separate from Part 75 in the event of monitor downtime or invalid data collection.

7. **Zero Emitting Unit Offsets**
   Concern: The regulation defines "zero emitting units" and Generator Credits in Section 7.0. It is not clear how this would apply to this regulation and the "time of use offset requirement" is not feasible.
   Justification: It is not clear how this provision would apply to a source as an offset or how the heat input conversions apply. Further, it is unclear if the zero emitting units must be owned by the same source or how the offset derived will be applied to a facility will many units. The offsets "as defined", appear to be based on hours of operation. This offset credit does not have any real incentive value because the generation planners cannot rely on assumptions for when these units would operate. Planning certainty is required and the only way to provide that is if the credits are based on installed capacity, either MW:MW or MW prorated.
   Recommendation: Revise applicability to include installed capacity.

8. **Margin of Compliance**
   Concern: The regulation requires very definitive emission rates but does not provide any provisions in the event applied technology does not achieve compliance targets.
   Justification: It is not clear that the technologies deemed feasible by Department can achieve the required emissions reductions as planned. For example, the rule assumes in-duct lime injection for SO2 can achieve Phase-I

target emissions whereas field experience doe not support that assumption. Control efficiencies for ACI applications vary based on specific plant conditions.

Summary

Regulation 1146 has the potential to achieve significant emissions reductions as well as retain Delaware's generation resources. However, modifications are needed to achieve these long term objectives. In the event these concerns are not addressed, Regulation 1146 as proposed will be not only the most stringent regulation in the Mid Atlantic Region, but one where compliance is not achievable.

Attachment C

Regional State Emissions Reduction Initiative Summary

Following is a summary to be used as a comparison of Delaware's proposed Regulation 1146 with CAIR and emission reduction programs (some promulgated, some in the rulemaking process) by regional states including: Maryland, Pennsylvania, New Jersey, New York, Virginia, and West Virginia.

a). **CAIR** – Proposed Regulation 1146 limits are based on CAIR targets. However, CAIR uses emission limit "targets" only to set cap and trade allocations for compliance. Further, the intent of CAIR is to set regional mass emission levels where larger sources can feasibly install controls (and over comply) and smaller sources (who can not), are forced to buy allowances from the larger sources. DNREC has taken the CAIR "cap and trade facility model targets" and converted them unit specific emission rate limits. Further, CAIR compliance timelines are Phase I @ 2009/2010 and Phase II @ 2015. Regulation 1146 timelines are 2009 and 2012.

b). **Maryland** – Regulation 1146 applies the same emissions targets as Maryland's "Healthy Air Act" and both initiatives feature unit specific mass emissions limitations (tons per year). However, the rule is not comparable because Maryland includes interstate trading among 7 power plants, and the net emissions targets are facility wide. Regulation 1146 requires unit specific compliance and does not allow regional or state trading or facility averaging. Further, the MD timelines are less stringent for SO2 and Hg.

c). **Pennsylvania** – PA is in the process of developing an Hg regulation. Further, PA recognizes compliance can be achieved as a co-benefit from SO2 and NOx controls and its compliance timelines are reasonable. PA does not mandate any SO2 or NOx controls or emissions limits.

d). **New Jersey** – The New Jersey Mercury Rule (limits defined in DNREC's conceptual rule - June 6, 2006) does not apply to existing sources, rather are an alternative for sources who can not meet the Hg requirements that elect to get repowering extensions. New Jersey does not have SO2 or NOx regulation for existing sources.

e). **New York** – The state of New York will adopt CAIR for SO2 and NOx. This is comparable to Delaware's plan to adopt CAIR. However, New York has not initiated additional SO2 regulation and maintains a state specific as well as NOx SIP cap and trade program for NOx. Regulation 1146 is more stringent because of the additional emissions limits and the unit specific requirements.

f). **Virginia/West Virginia** – The Clean Smokestacks Legislation (Virginia rulemaking in progress) requires the adoption of CAIR (no additional SO or NOx requirements) and a state specific version of CAMR. For Hg, Virginia requires larger units to install controls and smaller units can use allowances. CAIR most likely will include a limit on trading for plants in non-attainment areas and plant specific retirement of early reduction credits (Dominion). Trading on Hg will be allowed but limited. They can sell excess allowances but cannot use them. AEP (the other major generator) can use allowances for compliance within 100 miles of the state line and only for common owned assets. West Virginia reported they have adopted CAIR and CAMR however with modifications on PRB criteria.

g). **Regulated States** – Many states such as North Carolina and Ohio have initiated emissions reduction programs although not as stringent as Delaware. These are not comparable to Delaware because cost recovery is provided. In Delaware, there is no cost recovery mechanism.